

What is claimed is:

1. A method for optimizing power delivery from an engine, the method including the steps of:

providing a predetermined maximum allowable revolutions per minute function for time from a reference;

measuring the revolutions per minute of the engine at a particular time from the reference;

comparing the measured revolutions per minute of the engine at the particular time from the reference to the maximum allowable revolutions per minute value provided for the particular time; and

decreasing power from the engine when the measured revolutions per minute of the engine equals or exceeds the provided maximum allowable revolutions per minute value for the particular time.

2. The method of claim 1 wherein the step of comparing is performed at least every engine cycle.

3. The method of claim 1 wherein the method further includes providing the reference, and tracking a time from the reference.

4. The method of claim 1 wherein the step of providing a maximum allowable revolutions per minute value includes providing a plurality of values at respective times from the reference.

5. The method of claim 4 wherein the method includes interpolating values between the respective times.

6. The method of claim 1 wherein the step of providing a maximum allowable revolutions per minute value includes specifying a time-based function for the value.

7. The method of claim 6 wherein the step of providing a function includes varying the value linearly from a beginning to an end of a time period.

8. The method of claim 1 wherein the step of providing a maximum allowable revolutions per minute value includes providing at least one time-based function where each function provides values for an expected engine condition.

9. The method of claim 8 wherein the expected engine condition is selected from the group of period of burnout, period of launch, period of an engine gear, or period after conclusion of a race.

10. The method of claim 1 wherein the step of providing a maximum allowable revolutions per minute value includes specifying at least two times from the reference with respective revolutions per minute values, and includes interpolating revolutions per minute values for times between each specified time from the reference.

11. The method of claim 1 wherein the step of providing a maximum allowable revolutions per minute value includes providing a constant value for at least one specified time period.

12. A method for optimizing power delivery from an engine, the method including the steps of:

providing at least one predetermined maximum allowable revolutions per minute rate of change;

providing a permitted target revolutions per minute value for a specific time;

increasing the permitted target revolutions per minute value at the predetermined maximum allowable revolutions per minute rate of change;

measuring the revolutions per minute of an engine for at least one subsequent time;

comparing the revolutions per minute of the engine for the subsequent time to the permitted target revolutions per minute value for the subsequent time; and

decreasing power from the engine when the revolutions per minute of the engine equals or exceeds the permitted target revolutions per minute value for the subsequent time.

13. The method of claim 12 wherein the step of measuring the revolutions includes measuring the cylinder-to-cylinder rotation of a crankshaft.

14. The method of claim 13 wherein the step of measuring the rotation of the crankshaft includes providing a crank trigger pickup for measuring the rotation of the crankshaft.

15. The method of claim 12 wherein the step of providing a rate of change includes providing at least one function.

16. The method of claim 15 wherein the step of providing at least one function includes providing at least one linear function.

17. The method of claim 15 wherein the step of providing a function includes providing a plurality functions for different transmission gears.

18. The method of claim 15 wherein the step of providing a function includes providing a plurality of functions for different speeds.

19. The method claim 12 wherein the step of providing permitted target revolutions per minute value at the specific time includes calculating the provided permitted target revolutions per minute value at the specific time from a measured revolutions per minute of the engine value at that specific time.

20. The method of claim 19 wherein the step of calculating includes adding a factor to the measured revolutions per minute of the engine value.

21. The method of claim 20 wherein the step of adding the factor includes adding a margin value.

22. The method of claim 21 wherein the step of adding the margin value includes calculating the margin value.

23. The method of claim 22 wherein the step of calculating the margin value includes interpolating a value between at least two predetermined values.

24. The method of claim 22 wherein the step of calculating the margin value includes calculating a value based on a function.

25. The method of claim 20 wherein the step of adding the factor includes adding a RPM difference value based on a four-cycle historical RPM values for the engine.

26. The method of claim 19 further including:

calculating a temporary value for measured revolutions per minute of the engine values at times subsequent to the specific time;

comparing the temporary value to the permitted target revolutions per minute value at each subsequent time;

setting a new permitted target revolutions per minute value for each subsequent time when the temporary value is lower than the permitted target revolutions per minute value; and

increasing the permitted target revolutions per minute value at the predetermined maximum allowable revolutions per minute rate of change.

27. The method of claim 26 wherein the steps are repeated continuously.

28. The method of claim 26 wherein the steps are repeated every engine cycle.

29. The method of claim 12 further including a step of providing a hold after the decreasing of the engine power during which a new permitted target revolutions per minute value is not provided regardless of whether the temporary value at that time is less than the permitted target revolutions per minute value at that time.

30. A method for preventing loss of traction between tires of a vehicle and a road, the steps including:

providing a permitted target revolutions per minute value for a specific time wherein the permitted target revolutions per minute value increases at a predetermined revolutions per minute versus time rate;

providing a plot of predetermined maximum allowable revolutions per minute versus time from a reference;

measuring the revolutions per minute of an engine for at least one time subsequent to the reference;

comparing the revolutions per minute of the engine for the time subsequent to the reference to a value determined from the plot for the time subsequent;

if the time subsequent to the reference is also subsequent to the specific time, comparing the revolutions per minute of the engine for the time subsequent to the permitted target revolutions per minute value for the subsequent time;

decreasing power from the engine when the revolutions per minute of the engine equals or exceeds the permitted target revolutions per minute value for the subsequent time; and

decreasing power from the engine when the revolutions per minute of the engine equals or exceeds the provided maximum allowable revolutions per minute value for the particular time.